

REMARKS

This is in response to the Office Action mailed December 18, 2003, in which claims 1, 3-5, 8, 9 and 20-23 were rejected. With this Amendment, Applicant has amended claims 1, 4, 5, 21 and 23. Reconsideration of the Application, as amended, is respectfully requested.

CLAIM REJECTIONS - 35 U.S.C. §102(e)

In the Office Action, the Examiner rejected claims 1, 3, 4, 9 and 20-22 under 35 U.S.C. §102(e) as being anticipated by Niwa (US 2001/0015871 A1). Applicant respectfully traverses the rejections.

Independent claim 1 has been amended to describe a step of "implanting an element having an atomic weight of less than or approximately equal to that of argon (Ar) into the first side wall to thereby transform the first side wall into a magnetically dead side wall and reduce the width of the magnetically active region and the track width of the write element by a thickness of the magnetically dead first side wall." Applicant submits that such as step is neither taught nor suggested by the cited reference.

In particular, Niwa only discloses the injection of relatively heavy elements (niobium (Nb) having an atomic weight of 92.90638, chromium (Cr) having an atomic weight of 51.9961, and zirconium (Zr) having an atomic weight of 91.224) to reduce the magnetic width of the head 10 [0072]. Additionally Niwa discloses that the elements are injected to a depth of approximately 150 nm or 200 nm when injected vertically with respect to the surface at an energy of 300 KeV or 400 KeV, respectively [0087]. The injection of the relatively heavy elements of Niwa into the magnetic structure at such high energy levels etches or erodes the structure thereby changing its

physical shape. Such shape changes can adversely affect the ability to control the demagnetization of the structure due to the continuously changing dimensions of the structure. Furthermore, the modifications to the physical structure can effect subsequent processes that complete the formation of the write element.

The present invention, as described in claim 1, utilizes lighter elements than those disclosed in Niwa. The injection of such lighter elements into the magnetic structure (writer pole portion) results in the desired demagnetization of a portion of the magnetic structure while avoiding the physical erosion of the magnetic structure to the extent caused by the method disclosed in Niwa. As a result, the method of the present invention described in claim 1 includes non-obvious advantages over the method disclosed in Niwa. More importantly, Applicant submits that Niwa fails to disclose all the features of claim 1, and requests that the rejection be withdrawn. Additionally, Applicant submits that claims 3, 4 and 9 are allowable as being dependent from allowable base claim 1, and requests that the rejections be withdrawn.

Independent claim 20 is directed to a method of forming a writer pole or a write element that includes a step of "reducing the initial width of the magnetically active region without reducing the width of the writer pole portion." Applicant submits that Niwa fails to teach or suggest such a method. Instead, as described above, the method of Niwa causes the magnetic structure to erode due to the high atomic weight of the elements and the high energy level at which they are injected into the magnetic structure, thereby changing its physical width. Accordingly, Niwa fails to disclose all the features of claim 20, and request that the rejection be withdrawn. Additionally, Applicant submits that claims 21 and 22 are allowable as being

dependent from allowable base claim 20, and requests that the rejections be withdrawn.

CLAIM REJECTIONS - 35 U.S.C. §103(a)

In the Office Action, the Examiner rejected claims 5, 8 and 23 under 35 U.S.C. §103(a) as being unpatentable over Niwa. With regard to claims 5 and 23, the Examiner found Niwa to remain silent concerning the implantation of nitrogen, argon, boron and phosphorous. However, the Examiner took Official notice that ion implantation utilizing such elements is "notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known." Applicant respectfully traverses the Examiner's assertion and requests a showing of a reference in support therefore, as required by MPEP 2144.03.

Even if sufficient evidence could be obtained to support a finding that ion implantation of nitrogen, argon, boron and phosphorous is well-known, Applicant submits that further evidence of a suggestion or motivation to use such ion implantation for the purpose of reducing a width of a magnetically active region of a writer pole portion must be presented to establish a *prima facie* case of obviousness. The Federal Circuit has stated, "virtually all [inventions] are combinations of old elements." Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983). The Federal Circuit has also found that rejecting patents solely by finding prior art corollaries for the claimed elements would permit an Examiner to use a claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention, which would be "an illogical and inappropriate process by which to determine patentability." Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996). Accordingly, even

seemingly simple changes require a finding of a suggestion in the prior art to make the modification to avoid the improper use of hindsight. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Therefore, even if the Examiner can produce a reference that teaches the ion implantation of the claimed elements, there must be some motivation or suggestion to modify the teaching of Niwa to utilize the elements in order to obtain the new and non-obvious advantages of the present invention. Applicant submits that the mere fact that it could be possible to perform such a substitution does not constitute any motivation or suggestion to actually perform the substitution or, more particularly, to modify Niwa in such a manner as to render claims 5 and 23 obvious. As a result, Applicant believes that the Examiner will be forced to improperly rely upon the teachings of Applicant's disclosure to discern the "obviousness" of the claimed invention. Such use of hindsight would be improper. *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002) ("It is improper, in determining whether a person of ordinary skill in the art would have been led to this combination of references, simply to '[use] that which the inventor taught against its teacher.'") (quoting *W.L. Gore v. Garlock, Inc.*, 220 USPQ 303, 312-13 (Fed. Cir. 1983)). Accordingly, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness against claims 5 and 23, and requests that the rejections be withdrawn.

Applicant further submits that claim 8 is allowable as being dependent from allowable base claim 1, and requests that the rejection be withdrawn.

#### CONCLUSION

In view of the above comments and remarks, Applicant respectfully believes that the present application is in condition for allowance. Reconsideration and favorable action is

respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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